What is claimed is:

1. A system for generating installation instructions for a device made up of a variable number of components, comprising:
- means for specifying desired components for a device;
- sorting means coupled to the specifying means for identifying a plurality of installation tasks dependent on the components specified;
- sequencing means for sequencing the tasks in a desired order for installation of the components;
- memory means for storing individual assembly instructions corresponding to each task; and
- instruction generation means coupled to the sequencing means and to the memory means for assembling the individual assembly instructions for installation of the components, said assembled instructions being different dependent on the particular components specified.

2. The system of claim 1 wherein the means for specifying desired components for a device comprises a topology file which comprises representations corresponding to a complete set of components for installation of a complete computer system.

3. The system of claim 2 wherein the topology file representations define the placement of components within the device.

4. The system of claim 3 wherein the topology file representations define the connection of components within the device.

5. The system of claim 2 wherein the topology file comprises a set of records, each record corresponding to a component,
- one of said records being divided into at least five versions, comprising:
- a rack version for a rack component;
- a storage media version for storage media components within a rack;
- a card cage version for card cage components within the rack;
- a card version for card components within a card cage; and
- a cable version for cables connecting the racks, card cages and cards.

6. The system of claim 5 wherein the topology file further comprises a representation of the parentage of the storage media, card cages, cards and cables.

7. The system of claim 1 wherein the means for specifying desired components for a device comprises a pair of topology files which describe a set of components for an existing computer system and a set of components for a desired computer system.

8. The system of claim 7 wherein the sorting means comprises means for determining which components need to be added to the existing computer system, and which components need to be removed from the existing computer system, which components need to be moved, from the information contained in the pair of topology files to install the desired computer system.

9. The system of claim 8 wherein the sorting means identifies tasks associated with the addition movement, and the removal of components.

10. The system of claim 1 and further comprising a task file coupled to the sorting means and containing representations of installation tasks associated with each component.

11. The system of claim 10 wherein the task file further contains representations of pseudo tasks not associated with any particular task.

12. The system of claim 10 wherein the task file further contains an estimate of the time for completion of each task.

13. The system of claim 12 wherein the task file further contains an estimate of the time for completion of a task when it is performed in conjunction with other like tasks.

14. The system of claim 10 wherein the task file further comprises a representation of a perspective for a task.

15. The system of claim 10 wherein the task file further indicates a subcomponent associated with a task, for which a further task is defined.

16. The system of claim 1 wherein the sequencing means comprises an expert system program using a set of rules for sequencing the tasks, said rules comprising:
- arranging tasks which can be performed with the device powered on first;
- grouping tasks which are physically located together into a group to be performed together; and
- avoiding scheduling tasks which would make further tasks more difficult.

17. The system of claim 1 and further comprising a translator means coupled to the sequencer means for further defining the individual assembly instructions.

18. The system of claim 1 wherein the means for specifying desired components comprises a topology file which comprises representations corresponding to selected characteristics of each component.

19. The system of claim 18 wherein the memory means stores multiple assembly instructions for some components, and wherein the translator means selects one of the instructions for a component based on characteristics of the component.

20. The system of claim 19 wherein the assembly instructions stored in the memory means comprise:
- modules of text; and
- modules of graphic representations of the components.

21. The system of claim 20 wherein the translator means selects instructions from a plurality of text and graphic modules for one a task.

22. The system of claim 1 wherein the instruction generation means comprises a task to graphics manager for creating line drawings for the instructions based on the components specified.

23. The system of claim 22 and further comprising an element description file containing a record for each component, said records identifying physical characteristics and naming information for each component.

24. The system of claim 23 wherein the task to graphics manager is coupled to the element description file, and comprises means to identify variable information from the element description file for each instruction.

25. The system of claim 24 wherein the variable information comprises the physical characteristics of a component, and the task to graphics manager further comprises means coupled to the element description file to create scaled line drawing definitions from the information.

26. The system of claim 25 wherein the task to graphics manager further comprises means coupled to the element description file for inserting names from the element description file into the scaled line drawings to identify the components therein.

27. A system for identifying tasks associated with